

Hitchcock's Machine Tool Blue Book

APRIL, 1933

TWENTY-EIGHTH YEAR

SPEED
SPOT WELD

THESE LIKE AND UNLIKE

METALS
SAVE
50%

PRODUCTION COSTS

M METAL A L	ALUMINUM	ALUMINUM ALLOY	COPPER	COPPER ALLOY	IRON	STEEL	STAINLESS STEEL	TIN	ZINC	LEAD	SILVER	GOLD	PLATINUM
ALUMINUM	100	100	100	100	100	100	100	100	100	100	100	100	100
ALUMINUM ALLOY	100	100	100	100	100	100	100	100	100	100	100	100	100
COPPER	100	100	100	100	100	100	100	100	100	100	100	100	100
COPPER ALLOY	100	100	100	100	100	100	100	100	100	100	100	100	100
IRON	100	100	100	100	100	100	100	100	100	100	100	100	100
STEEL	100	100	100	100	100	100	100	100	100	100	100	100	100
STAINLESS STEEL	100	100	100	100	100	100	100	100	100	100	100	100	100
TIN	100	100	100	100	100	100	100	100	100	100	100	100	100
ZINC	100	100	100	100	100	100	100	100	100	100	100	100	100
LEAD	100	100	100	100	100	100	100	100	100	100	100	100	100
SILVER	100	100	100	100	100	100	100	100	100	100	100	100	100
GOLD	100	100	100	100	100	100	100	100	100	100	100	100	100
PLATINUM	100	100	100	100	100	100	100	100	100	100	100	100	100

$\frac{1}{2}$ To 75 K. V. A. As Low As \$55.

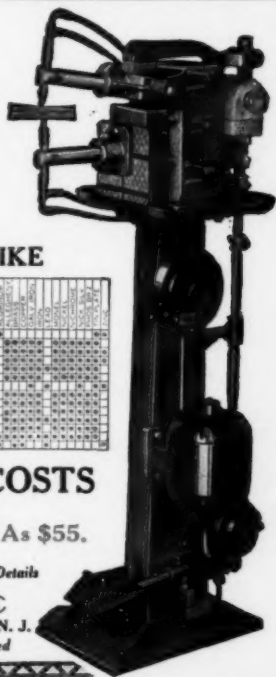
Submit Samples for Production Estimates and Details

EISLER ELECTRIC

763 S. 13th Street

NEWARK, N. J.

Distributor and Dealer Connections Desired



PUBLISHED AT 508 So. DEARBORN ST. CHICAGO

KRW Hydraulic and Sensitive ARBOR PRESSES

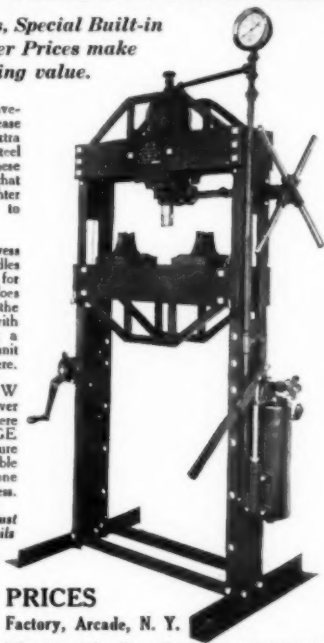
New Improvements, Special Built-in Features and Lower Prices make them an outstanding value.

THE last word in convenience, efficiency and ease of operation. Built extra strong and well braced with steel trusses electrically welded, these presses will withstand strains that would cause presses of lighter and inferior construction to buckle or collapse.

Hand wheel for sensitive press operations has sliding handles which pull out to the ends for increased leverage. Work does not have to be changed from the work table as is the case with other make presses having a separate sensitive press unit mounted on the side or elsewhere.

The importance of this KRW feature as a time and labor saver can be appreciated. Also there is **NO EXTRA CHARGE** for this important built-in feature on a KRW Press. Work table can be raised easily with one hand. A strictly one-man Press.

Write for special circular, just off the press, giving full details and specifications of all KRW Arbor Presses.



PRICES

F. O. B. Factory, Arcade, N. Y.

- | | |
|---|----------|
| No. 37—35 ton Hydraulic and Sensitive Arbor Press (hand operated) | \$128.00 |
| No. 37B—35 ton Hydraulic and Sensitive Arbor Press (air-oil operated) | 128.00 |
| No. 37E—50 ton Hydraulic and Sensitive Arbor Press (hand operated) | 150.00 |
| (Can also be furnished in air-oil operated at same price) | |
| No. 37F—70 ton Hydraulic and Sensitive Arbor Press (hand oper. only) | 275.00 |
| Gauge and fittings, \$15.00 extra on all presses. | |

K. R. WILSON

10-16 Lock Street, Buffalo, N. Y., U. S. A.

EXPORT DEPARTMENT
126 Liberty St., New York

WEST COAST BRANCH
722 Mateo St., Los Angeles

Hitchcock's Machine Tool Blue Book

**Selected
Circulation**

**Over
25,000**

APRIL, 1933

TWENTY-EIGHTH YEAR

Meet Prosperity Half-Way

Important events are following one another so fast that a lot of history has been made during the last month. And it is still being made at a rapid pace.

The President has been granted extraordinary authority to reduce the expenses of the Government, and we are on our way to a balanced budget.

Within the last thirty days every bank in the country suspended payment. But that situation is clearing up rapidly, with the miracle of greater public confidence in our banks than before they closed their doors.

The Government is setting a fast pace. The people are not far behind. They are buying. This will set the wheels to turning before we realize that the depression is losing its grip and that once more the sun is shining.

Manufacturers are looking over their equipment. They are planning now on what they will need to meet the demand that is not far off. And soon their purses will open to put those plans into effect.

Now is the time to meet prosperity half-way and reach those manufacturers with advertising which tells them what your machines will do—in the BLUE BOOK preferably, because of its wide and carefully controlled distribution, its effectiveness and the unusual economy of its service.

Published By

Hitchcock Publishing Co.

508 S. Dearborn St.,

Chicago, Ill.

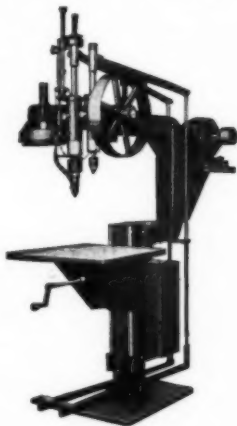
Consult the Classified Finding Index for your requirements

Do Your Screw Driving

The Modern Way—

It Pays!

The Reynolds
Automatic
MAGAZINE
FED
Screw Driving
Machine



Can Save You from 65 to 85% Over Other Methods

This Modern Machine built for high speed production will drive from 8,000 to 16,000 screws per day. The Magazine Feed enables one man to do the work five men using hand methods can accomplish. Every screw is firmly imbedded and driven so accurately that many users have been able to reduce the number and sizes of screws used.

Drop us a line, giving dimensions over all of your work, the length and gauge of screws used, and we'll submit facts and figures Showing how the REYNOLDS can reduce your costs.

The Reynolds Machine Company
Dept. H. H. Massillon, Ohio

"THE MODERN WAY TO DRIVE SCREWS"



DEPENDABLE

**-ELCO-
SCREWS**

REDUCE ASSEMBLY COSTS



Uniform High Quality



Care and precision, backed by modern production methods is your guarantee that Elco screws will meet your most exacting requirements on both the quality and price basis. Their uniformity will result in speedier and better assembly.



**MACHINE SCREWS
MACHINE SCREW NUTS
WOOD SCREWS
LAG SCREWS
CAP SCREWS
PIPE PLUGS**



*Write or Wire For
Samples and Prices*



**ELCO TOOL & SCREW
CORPORATION**



1808 Broadway, Rockford, Ill.

"It Pays to Use Good Screws"



MARVEL

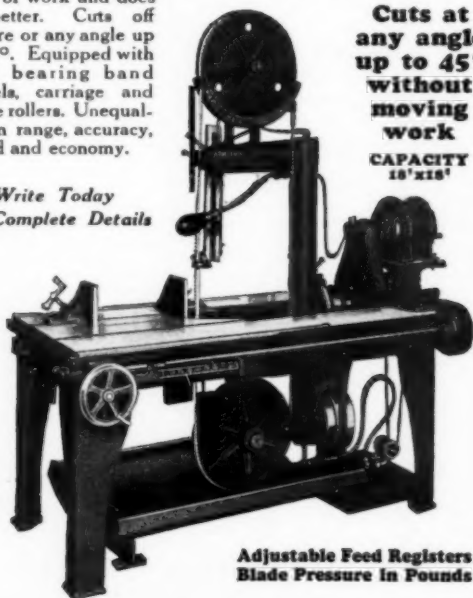
No. 8 Metal Band Saw

FULLY UNIVERSAL, simple to operate, always ready for any job—from the largest to the smallest. Cuts off bar steel, pipe, tubing, mouldings, structural shapes, etc. Does a greater variety of work and does it better. Cuts off square or any angle up to 45°. Equipped with ball bearing band wheels, carriage and guide rollers. Unequalled in range, accuracy, speed and economy.

*Write Today
for Complete Details*

**Cuts at
any angle
up to 45°
without
moving
work**

**CAPACITY
18"x18"**

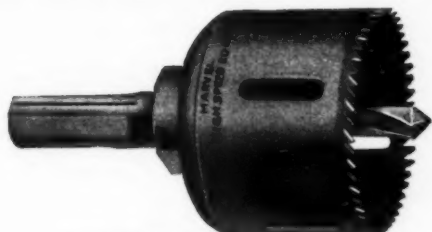


**Adjustable Feed Registers
Blade Pressure in Pounds**

ARMSTRONG - BLUM

341 N. Francisco Ave.,

MARVEL



MARVEL HOLE SAW

26 Sizes, $\frac{3}{4}$ " to $4\frac{1}{8}$ "

Cuts clean, round holes through steel, wood, cast iron, brass, copper, bakelite, slate, marble, etc., to a depth of $1\frac{1}{2}$ in. The teeth are HIGH SPEED STEEL, welded to a tough, special alloy UNBREAKABLE BODY. They stand up in use in portable electric drills and drill presses. YOU WANT THE BEST. Write us for details, price, etc.



MARVEL HACK SAW BLADES

MARVEL High Speed Edge Hack Saw Blades are guaranteed not to break in two in any machine—not even by accident. Marvel blades with the genuine high speed steel cutting edge electrically welded to a tough special alloy back outlast ordinary blades from six to ten times and with faster, cleaner cuts, and fewer blade changes.

Send for Descriptive Circulars

MANUFACTURING CO.
CHICAGO, ILLINOIS

A New Internal

**Developed by BLESER MOTORS, Ltd.
16th and Madison Sts., Springfield, Ill.**

Are You Interested —

1. *In promoting an engine* which will outperform any internal combustion engine now known to industry, and which can be manufactured and sold cheaper than the conventional type of engine?
2. *In financing* such a project?
3. *In having one or more engines built for special purposes* (races, etc.) where hitherto unheard-of performance is wanted? You get light weight, small size, lack of vibration, extreme high power, smooth power, etc., at no greater cost than with other specially built engines.
4. *In obtaining manufacturing rights and patent license* for commercial production of these engines?
5. *In handling financial or sales end* of such production?
6. *In the development of oil engines and further improvements* in internal combustion engines?
7. *In the production of development of air motors or air compressors, pumps, etc.,* of extremely small size and weight, and with extremely large capacity?
8. *In putting us in touch with parties who would be interested* in any of the above projects?

IF SO, YOU ARE INVITED to write us and arrange for a running demonstration of the new Bleser Motor illustrated herewith.

Bleser Motors, Ltd

16th and Madison Sts.,

Springfield, Illinois

Combustion Engine

The picture herewith is from an actual photograph of the working model of the

No. 539 Bleser Motor



SPECIFICATIONS:

TYPE, 12 cyl. water cooled, 4 cycle.

HORSEPOWER, ...200 at 1200 r.p.m.
(Pony brake test)

DIAMETER,19 inches.

FRONTAL AREA, .2 sq. ft. (approx.)

WEIGHT,386 lbs.

LENGTH,41½ in.

DISPLACEMENT,539 cu. in.

24 explosions in 2 revolutions.

Patented and Patents Pending

This is a cam engine utilizing six double ended pistons, with roller bearing piston rollers working in opposed cylinders, which are arranged in a circle around the main shaft, and are parallel to the main shaft. The cam is so constructed that each piston goes through four cycles (two complete crank motions) during each revolution, and each cylinder therefore fires once per revolution of the main shaft.

NOTE

This photo is of the engine mounted in the test stand just as it is run. The radiator mounted in the top of the stand is of course temporary, and is used to cool the water while it is being run inside the building. The instrument panel containing the throttle, tachometer, temperature gauges, etc., is mounted at the rear of the stand.

*Additional information will be
furnished on request*

Bleser Motors, Ltd.

16th and Madison Sts.,
Springfield, Illinois

Improved Thompson Universal Grinder

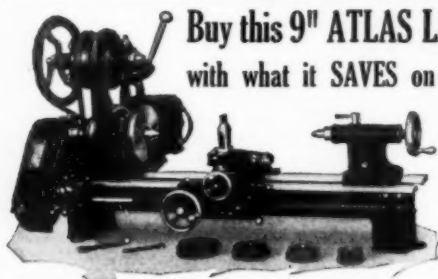
Self-contained and motor driven, this standard Grinder combines efficient means for the rapid and accurate production of every grinding operation required in a machine shop.

All standard machines equipped with auxiliary independent coarse cross feed for surface grinding.

Capacity 12"x36"

**The Thompson
Grinder Co.**

1534 West Main St.,
SPRINGFIELD, OHIO



Buy this 9" ATLAS LATHE
with what it SAVES on power

\$79⁰⁰

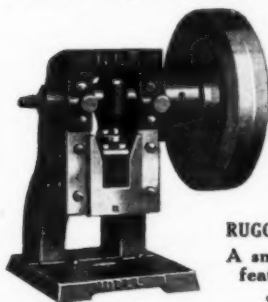
**Complete
as Shown
less motor.**

Transfer your small lathe work from large, power consuming lathes to an ATLAS. Use only $\frac{1}{4}$ H. P. motor. Can easily pay for itself in 6 to 8 months. A fine, accurate machine, strongly built of best materials. Self contained. 18" between centers, also larger sizes. Cuts all standard screws from 4 to 72 per inch. Two weeks trial. Satisfaction or money back guaranteed. Easy terms. *Write for all details.*

ATLAS PRESS CO., 1850 N. Pitcher St.,
Kalamazoo, Mich.

ALLEN POWER BENCH TYPE PUNCH PRESS

The Ideal Press For Light Work



Pays for itself by lowering operating and upkeep costs.

Height $15\frac{1}{2}$ ". Base size $8\frac{1}{2} \times 8\frac{1}{2}$ ".
Flywheel 10 " dia. Weight 28 lbs.
Stroke, standard $\frac{3}{4}$ ".
Positive Single Pin Clutch.
Capacity, soft steel disc $\frac{3}{4} \times \frac{1}{16}$ ".
Weight 100 lbs.
Power required $\frac{1}{4}$ to $\frac{1}{2}$ H. P.

Price \$75.00

Press Fully Guaranteed

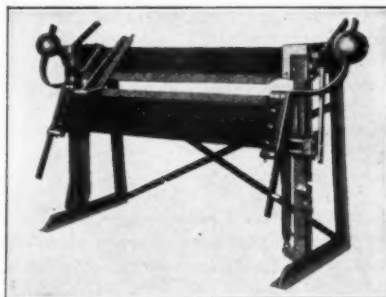
RUGGED—POWERFUL—RELIABLE

A small punch press with the features of a heavy machine.

Send for complete details

Allen-Morris Machine Tool Co.
Fairmount Station, Kansas City, Mo.

Whitney - Jensen BRAKE



Capacity 16 gauge or lighter.

Can be changed into box or pan brake in 10 or 15 minutes, making it a dual machine.

Bends opposite from any other machine.

Stationary platen makes very square corners possible.

Send for Our Catalog and Complete Information

WHITNEY METAL TOOL COMPANY
95 FORBES ST., ROCKFORD, ILL.

The Short-Sighted Chiseler

By J. H. CONNORS

Vice President, The B. F. Goodrich Company.

"The Nemesis of quality is The Chiseler. A character created by the drama of the times, he is the modern prototype of David Harum.

"To the penalties of a transaction that is unprofitable to the supplier, he is blind. Believing implicitly in the adage that a 'penny saved is a penny earned', he is now requiring a price based on sheer out-of-pocket costs.

"Carried further, this process of 'chiseling overhead' will bring the solid rock of quality crashing down upon the buyer and throw open the markets of the world to unscrupulous manufacturers who regard the worshipers of price as their lawful prey.

"The debasement of quality can only mean the lowering of performance standards and a deeper drain upon incomes—the major variable cost-factor that still remains. Which means in turn the flight of consumer purchasing power and unfortunate social consequences.

"Here at Goodrich we believe The Chiseler can no longer be permitted to speak for American Industry—which sells, as well as buys.

"We believe his voice will soon be submerged in a veritable clamor of voices, until now strangely silent, demanding recognition for quality on a record of concrete, constructive performance.

"We are pledged to preserve quality so long as American Industry will insist on genuine value in return for price."

New 1933 Emerald Motors

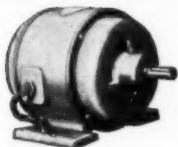
Thoroughly tested and proven as to their merits.

Five Year Guarantee

SINGLE PHASE TYPE MOTORS:— $\frac{1}{2}$, $\frac{3}{4}$ and 1 h. p., 110/220 volt, 60 cycle, 1750 r. p. m., repulsion induction.

Also Three Phase Motors in $\frac{1}{2}$ h. p. to $1\frac{1}{2}$ h. p. sizes.

These modern Motors are a winning combination of simplicity, ruggedness and dependability. And the saving in manufacturing costs is passed on to our customers.



*Attractive discounts to
dealers and manufacturers.*

Write for details.

Emerald Electric Co.
Adrian, Michigan

ARMSTRONG

TRADE MARK REG. IN U.S. PAT. OFFICE

HIGH SPEED

Bits and Blades

Now

of a new steel that
permits 25 to 100 more f.p.m.

Always far superior to ordinary High Speed Steels that are sold by the pound ARMSTRONG HIGH SPEED Bits and Blades have been made still better with a new steel that makes practicable greater speeds and feeds and materially reduces tool grinding. These bits and blades are carefully heat treated, hardened, tempered...ready to grind and use. They are strictly speaking fine tools in the rough, are by far the most economical.

Write for ARMSTRONG BROS. TOOL CO.
Catalog "The Tool Holder People"
B-27 308 N. Francisco Ave., CHICAGO, U. S. A.



For Light and Heavy Etching

With 24 Stages of Control.

The LUMA Master Etchtool fulfills every marking requirement that can be done by an electric Etching outfit.

A Production Tool with as many as 24 different stages or varieties of control for regulating the depth of marking, this tool can be used for extra light marking of machinest scales, micrometers and fine tools or can be used for *extra heavy and deep* marking of rough and unfinished iron, cast iron, forgings, steel plates, etc.

Send for circular giving complete data and details of this modern instrument.



LUMA ELECTRIC EQUIPMENT CO.

DEPT. H.—Main P. O. Box No. 131—TOLEDO, OHIO

Noiseless, Fast Riveting with a GRANT



Speed—One rivet per second.

Uniformity—Each rivet is finished to the exact degree of tightness or looseness you require.

Finish—Heads perfectly formed, un mutilated.

GRANT NOISELESS SPINNING RIVETER

So well adapted to difficult work that no corner is too inaccessible for it to place a rivet. Yet it is so simple in operation that a boy or girl can handle it efficiently.

Send samples of your work for riveting and cost estimate

The Grant Mfg. & Machine Co.
C. E. Station, Bridgeport, Conn.

To Industrial Plants

For the mutual benefit of yourselves and our advertisers, we want to be sure that the Blue Book goes, without cost, to those in your plant who can use it to good advantage.

Quite a number of you, particularly among automobile manufacturers, have sent us lists of the prominent men in your organizations who are most closely identified with the planning of your improvements and the selection or purchase of your machinery.

If you have not done this, you are earnestly requested to send us such a list of names, so that we may mail the Blue Book regularly every month to those of your own selection, without cost or obligation of any kind whatsoever. Simply tear out this page, write the names on the reverse side, and mail it to the publisher.

Our only object is to make the Blue Book the best buying and selling medium on earth between manufacturers of machine tools and shop equipment and plants such as yours.

(See next page)

GRINDERS



PULLEY GRINDERS

Finish Belt Surface, Crowned or Straight, from the Rough. Also Truck Treads and Curved Work.

GRINDER CHUCKS hold Abrasive Rings, 10" to 30" dia.

for roughing and finishing

FLAT WORK

Ring Wheels 12" and 18"
Table travels 16" and 24"

For Production to Tool Room

*Send
for
Circulars*

**Work Bound
to be True**



**Flat Work
Grinder**

THE GRAHAM MFG. CO., 70 Willard Ave.
PROVIDENCE, R. I.

WANTED

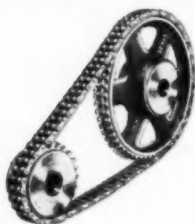
SALES PROMOTION AND ADVERTISING POSITION

More sales inquiries and larger sales volume, domestic and foreign, can actually be produced by well known Sales Promotion and Advertising Manager, with unusual training and experience, now seeking new connection.

Ask to see credentials.

Address: Box 112, c/o Hitchcock Publishing Co.
508 S. Dearborn St., Chicago, Ill.

STANDARDIZATION PAYS



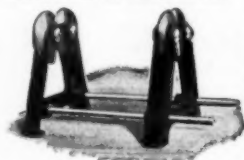
UP TO
100
HORSEPOWER
FROM STOCK!

SEND FOR CATALOG

BOSTON GEAR WORKS, INC.
DEPT. HMT, NORTH QUINCY, MASS.
BOSTON NEW YORK PHILADELPHIA CLEVELAND CHICAGO

BOSTON GEARS

Anderson Ever Ready
Exceedingly Sensitive



Balancing Ways
Easy to Manipulate

Made in six sizes to balance anything that revolves from a crank shaft to a 24,000 lb. turbine rotor. They require no special leveling, no adjustment, and no centers.

Equipped with glass-hard spindles, chilled steel discs, and especially sensitive ball bearings, to give accurate, long time service.

"Swing"	20 ^a	40 ^a	60 ^a	72 ^a	96 ^a	72 ^a
Greatest distance bet. standards	20 ^a	30 ^a	30 ^a	66 ^a	88 ^a	20 ¹
Capacity in lbs.	1000	2000	2000	5000	10000	24000
Approx. shipping weight	45	90	150	350	650	
Code	Depl	Ed	Ed	Ed	Ed	

Anderson Bros. Mfg. Co.
1915 Kishwaukee St., Rockford, Ill.

MARKING DEVICES

RUBBER STAMPS



STEEL STAMPS



BURNING BRANDS



ETCHED METAL
NAME PLATES



BRASS
LABELS



THE SCHWERTLE STAMP CO.
BRIDGEPORT, CONN.

Why Waste Time On Broken Taps ?



Every minute spent by your high-priced mechanics in digging out broken taps is a dead loss. When a tap breaks it should be *removed quickly with*

The Walton Tap Extractor

This handy tool has steel fingers which back out the tap *without injuring the threads*. It will save you many hours in the course of a year—paying for itself over and over again. Made in three and four-flute styles.

*Try One in YOUR SHOP—
Sent on 60-day Trial Basis*

The Walton Company
302 Pearl St., Hartford, Conn.

Here's A Real Market For YOU— A Fertile Field Over 25,000 Prospective Buyers

We believe it to be good judgment to inaugurate an advertising campaign in these pages, starting at once, as new conditions now point to an early improvement in business.

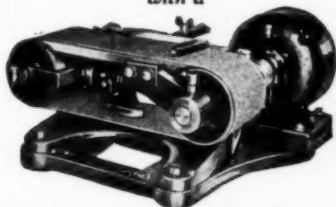
This publication has been the handbook of the industry now for over 27 years and rightfully enjoys a remarkable buyer interest. Advertisers who check their inquiries say it is a splendid result producer.

Let us send you complete information

Hitchcock Publishing Co.
508 South Dearborn St., Chicaga, Ill.

Abolish Expensive Hand Finishing

with a



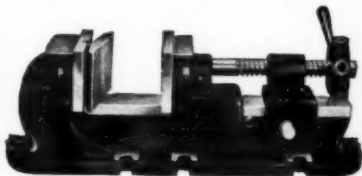
Simplex-M Abrasive Band Grinder

This Grinder accelerates production and cuts costs. Hand emerying or filing operations are antiquated in comparison. The use of this new modern machine assures straight grain finishes with sharp edges. *Details of this and other styles and sizes on request.*

**WALLS SALES CORP., 96 Warren Street
NEW YORK**

Gem Drill Press Vise

Discard Obsolete Equipment!



Made
In
3-sizes
Up To
10½"

Equip Your Plant with GEM VISES

J.E. Martin Tool & Die Works

528 W. State St.,

SPRINGFIELD, OHIO

WRITE FOR NEW PRICES

Soft Boiled Preferred.

A man walked reluctantly into a hat store.
I just lost a bet, he said, and I want to get a soft hat.
The salesman, selecting a hat from the shelf behind him, handed it to the prospective purchaser with the remark: This is the softest hat we have.

The customer gazed at it speculatively. What I want, he said reluctantly, is something a little more tender. I've got to eat it.

His Vacation.

He was standing on the corner, paying absolutely no attention to anyone. He shook his head and mumbled to himself: No, no, no—no, no, no! He paid no attention to the crowd that gathered but just kept on saying, No, no, no!

An officer shook his arm and said: What's the matter, my friend?

Nothing at all, came the reply, I'm just a "yes" man taking a day off!

No Wasted Time for Him.

The Scotchman had fallen into the well and, while swimming around in it, called to his wife. She came running to him and asked, Shall I call the servants from the field, that they may pull you out?

What time is it? inquired he.

Eleven-thirty, said his wife.

Well, never mind, said he, I'll swim around till dinner time!

Correct!

What is it that has 100 legs, no brains and sings?

All right, what?

Fifty chorus girls.

Transmigration.

The motorist had had an accident with his light car on a country road. He limped painfully to a telephone box and called up the nearest garage. Hello, said he, I've turned turtle. Can you do anything for me?

I'm afraid not, came the sweet feminine reply. You've got the wrong number. What you want is the zoo.

"ALNOR" Pyrometers

for the
Hardening
Furnace

MODEL 223

Inexpensive, yet accurate and durable, the ALNOR Pyrometer is used by large and small shops everywhere for heat-treating work. Because of its low first cost and compact size it is also very popular for soft metal melting, galvanizing, die casting, japanning, enameling, measuring flue gas temperatures and many other purposes.



Case diam.
4½ in.

Scale length
3½ in.

\$35

With 10 ft. Alloy Wire, connector block and a No. 8 gauge insulated thermo couple 24" long without protection tube

Write for descriptive folder

Illinois Testing Laboratories, Inc.
150 W. Austin Ave., Chicago, Ill.

BETTER-MADE
DIE SETS

BAUMBACH

AT LOWER
COST

24
DIFFERENT
STYLES



OVER
95,000
SIZES

STANDARDIZED

Semi-Steel

DIE SETS

Drop Forged Steel

Send For Our New 208 Page Catalog

E. A. BAUMBACH MFG. CO.
1810 South Kilbourn Ave., CHICAGO, ILLINOIS

Distribution of Hitchcock's Machine Tool Blue Book (Selected Circulation)

The table below shows the circulation of Hitchcock's Machine Tool Blue Book by States, and incidentally how the users of iron working machinery are distributed.

The figures given stand for the number of plants to which the Blue Book is sent, except for some hundreds of the larger manufacturers of metal products, where copies are addressed to the important mechanical officials by name.

The main reason why the Blue Book has thrived is its ability to put advertising messages across to the whole body of possible buyers everywhere in the country. Its value for that purpose hardly can be overestimated.

Revised to January 1, 1933

Alabama	149	Nevada	14
Arizona	34	New Hampshire.....	114
Arkansas	84	New Jersey.....	742
California.....	905	New Mexico.....	24
Colorado	189	New York	2,834
Connecticut	879	North Carolina	277
Delaware	52	North Dakota.....	32
District of Columbia.....	63	Ohio	2,874
Florida	115	Oklahoma.....	108
Georgia	246	Oregon	142
Idaho	25	Pennsylvania	2,605
Illinois.....	2,502	Rhode Island.....	189
Indiana	922	South Carolina	144
Iowa	468	South Dakota.....	32
Kansas	249	Tennessee.....	212
Kentucky	164	Texas	322
Louisiana.....	148	Utah	39
Maine	136	Vermont	82
Maryland	281	Virginia.....	194
Massachusetts.....	1,668	Washington	285
Michigan	1,673	West Virginia.....	147
Minnesota.....	376	Wisconsin.....	1,018
Mississippi	72	Wyoming	14
Missouri.....	668	American Possessions..	77
Montana	40	Foreign (Canada, Europe,	
Nebraska	124	Australia, etc.).....	659

Total 25,412

Of the above, 20,803 go to private concerns, 1,688 to railway mechanical and purchasing officials, 433 to technical schools, etc.

BURKE



Do you need a new $\frac{3}{8}$ " Capacity Sensitive Drill Press in your business? If so, be sure and see the Burke No. 222 before buying.

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Welders for Fine Work Priced As Low As

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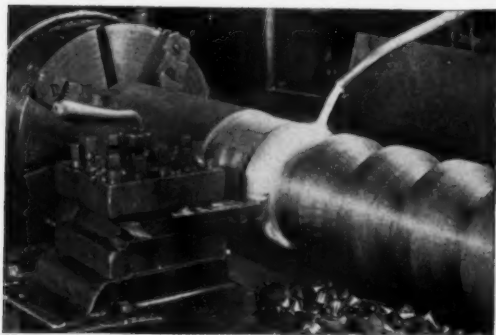
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Wilson K. R., Buffalo, N. Y.

Balancing Ways

Anderson Bros. Mfg. Co., Rockford, Ill.

Ball Bearings

Boston Gear Works, Inc., North Quincy,
Mass.

Band Saw Machines, for Metal

Armstrong-Blum Mfg. Co., 341 N. Francisco
Ave., Chicago

Bending Machines, Hand and Power

Armstrong-Blum Mfg. Co., 341 N. Francisco
Ave., Chicago
Excelsior Tool & Mch. Co., E. St. Louis, Ill.
Lewthwaite Mch. Co., T.H. 311 E. 47th., N. Y.

Blowers, Electric

Clements Mfg. Co., 6550 Naragansett Ave.,
Chicago, Ill.

Bolt and Nut Machinery

Foots-Burt Co., Cleveland, O.

Boring, Drilling & Milling Machines

Defiance Machine Co., Defiance, O.

Brakes, Hand Truck

Fisher Equip., 1281 Canton Bldg., Chicago

Brands, Burning

Schwerdtle Stamp Co., Bridgeport, Conn.

Cap Screws, Hexagon Head

Elco Tool & Screw Corp., Rockford, Ill.

Centers, Frictionless Live

Precision Gauge & Tool Co., Detroit, Mich.

Centers, Special

Precision Gauge & Tool Co., Detroit, Mich.

Chain Drives

Boston Gear Works, Inc., North Quincy,
Mass.
Cullman Wheel Co., 1359 Altgeld St., Chgo.

Chains, Silent and Roller

Cullman Wheel Co., 1359 Altgeld St., Chgo.

Chamfering Machines, Automatic

Grant Mfg. & Mch. Co., Bridgeport, Conn.

Chucks, Automatic

Proconier Safety Chuck Co., 14 S. Clinton
St., Chicago

Chucks, Collet

Proconier Safety Chuck Co., 14 S. Clinton
St., Chicago

Chucks, Drill

Etico Tool Co., Brooklyn, N. Y.

Chucks, Drill and Tap

Proconier Safety Chuck Co., 14 S. Clinton
St., Chicago

Chucks, Quick Change

Glenzer Co., J. G., Detroit, Mich.
Proconier Safety Chuck Co., 14 S. Clinton
St., Chicago

Chucks, Ring Wheel Grinder

Graham Manufacturing Co., Providence, R. I.

Cold Saws

Burke Machine Tool Co., Conneaut, Ohio

Contract Work Wanted

Burke Machine Tool Co., Conneaut, O.

Counterbores and Spot Facers

Glenzer Co., J. C., Detroit, Mich.

Demagnetizers

Luna Electric Equipment Co., Toledo, Ohio

Die Casting Machines.

Madison-Kipp Corp., Madison, Wis.

Dies, Blank and Forming

American Tool Works, Inc., Hartford, Conn.
Elco Tool & Screw Corp., Rockford, Ill.

Dies, Die Casting

Madison-Kipp Corp., Madison, Wis.

Die Sets

Baumgardner Mfg. Co., E. A., 1812 So. K.
bourne Ave., Chicago

Drill Fixtures

Stewek Tool Co., Detroit, Mich.

Drill Jigs

Stewek Tool Co., Detroit, Mich.

Drill Heads, Multiple

Stewek Tool Co., Detroit, Mich.

Drilling Attachments, High Speed

Graham Manufacturing Co., Providence, R. I.

Drilling Machines, Multiple Spindle

Foots-Burt Co., Cleveland, O.

Drilling Machines, Portable Electric

Strand Co., N. A., 6001 N. Lincoln St., Chgo

Drilling Machines, Sensitive

Burke Machine Tool Co., Conneaut, Oh
Foots-Burt Co., Cleveland, O.

Drilling Machines, Vertical

Foots-Burt Co., Cleveland, O.

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- Drills, Twist**
Cleveland Twist Drill Co., Cleveland, Ohio.
- Drives, Lathes**
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- Drive Screws**
Elco Tool & Screw Corp., Rockford, Ill.
- Electric Blowers**
Clements Mfg. Co., 6650 Haraganett Ave., Chicago, Ill.
- Electrical Instruments**
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- Emery Wheel Dressers and Cutters**
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Luma Electric Equipment Co., Toledo, Ohio
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- Fixture Locks**
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Boston Gear Works Inc., North Quincy, Mass.
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- Grinder, High Speed**
M. C. Tool Co., 116 S. Aberdeen St., Chicago
- Grinder, Hand**
M. C. Tool Co., 116 S. Aberdeen St., Chicago
- Grinding Machines, Belt**
Wells Sales Corp., 98 Warren St., New York
- Grinding Machines, Cutter, Reamer and Tool**
Thompson Grinder Co., Springfield, Ohio
- Grinding Machines, Cylindrical**
Thompson Grinder Co., Springfield, Ohio
- Grinding Machines, Die**
Thompson Grinder Co., Springfield, Ohio
- Grinding Machines, Internal**
Thompson Grinder Co., Springfield, Ohio
- Grinding Machines, Portable Electric**
Strand Co., N. A., 6001 N. Lincoln St., Chgo
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Graham Manufacturing Co., Providence, R. I.
- Grinding Machines, Ring Wheel**
Graham Manufacturing Co., Providence, R. I.
- Grinding Machines, Surface**
Thompson Grinder Co., Springfield, Ohio
- Grinding Machines, Universal**
Thompson Grinder Co., Springfield, Ohio
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M. C. Tool Co., 116 S. Aberdeen St., Chicago
- Grinding Wheels On Shanks**
M. C. Tool Co., 116 S. Aberdeen St., Chicago
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Armstrong-Bium Mfg. Co., 341 N. Francisco Ave., Chicago
- Hack Saw Machines**
Armstrong-Bium Mfg. Co., 341 N. Francisco Av., Chicago
- Jigs and Fixtures**
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Elco Tool & Screw Corp., Rockford, Ill.
Blewak Tool Co., Detroit, Mich.
- Knurls and Holders, for Turrets**
Graham Manufacturing Co., Providence, R. I.
- Lag Screws**
Elco Tool & Screw Corp., Rockford.
- Lathe Drives**
Cullman Wheel Co., 1350 Altgeld St., Chgo.
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Madison-Kipp Corp., Madison, Wis.
- Lubricators, Machine Tool**
Madison-Kipp Corp., Madison, Wis.
- Mandrels, Expanding**
Western Tool & Mfg. Co., Springfield, O.
- Machine Screws**
Elco Tool & Screw Corp., Rockford, Ill.
- Milling Attachments**
Burke Machine Tool Co., Cincinnati, Ohio

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Milling Machines, Bench

Burke Machine Tool Co., Conneaut, Ohio

Milling Machines, Hand

Burke Machine Tool Co., Conneaut, Ohio

Milling Machines, Plain

Burke Machine Tool Co., Conneaut, Ohio

Name Plates, Etched and Stamped

Schwerdtle Stamp Co., Bridgeport, Conn.

Nuts, Machine Screw

Elico Tool & Screw Corp., Rockford, Ill.

Oil, Cutting

Sun Oil Co., Philadelphia, Pa.

Oil, Lubricating

Sun Oil Co., Philadelphia, Pa.

Pins, Leader And Dowel

Baumbach Mfg. Co., E. A., 1812 So. Kellbourne Ave., Chicago

Pipe Plugs, Square Head and Slotted

Elico Tool & Screw Corp., Rockford, Ill.

Polishing and Buffing Machines

Excelsior Tool & Mch. Co., E. St. Louis, Ill.

Presses, Arbor

Atlas Press Co., Kalamazoo, Mich.
Wilson, R. K., Buffalo, N. Y.

Presses, Punch

Lewthwaite Mch. Co., T. H., 311 E. 47th., N. Y.
Allen-Morris Machine Tool Co., Kansas City, Mo.

Punch Press Feeds

Wittek Mfg. Co., 4309 W. 24th Place, Chgo.

Punch, Shear and Bender, Hand

Armstrong-Blum Mfg. Co., 341 N. Francisco Ave., Chicago

Punches, Hand

Armstrong-Blum Mfg. Co., 341 N. Francisco Ave., Chicago
Lewthwaite Mch. Co., T. H., 311 E. 47th., New York
Whitney Metal Tool Co., Rockford, Ill.

Punches and Dies

Lewthwaite Mch. Co., T. H., 311 E. 47th., N. Y.

Punches and Shears

Excelsior Tool & Mch. Co., E. St. Louis, Ill.

Pyrometers

Illinois Testing Laboratories, Inc., 138 W. Austin Ave., Chicago

Pyrometers, Portable & Stationary

Illinois Testing Laboratories, Inc., 138 W. Austin Ave., Chicago, Ill.

Reamers, Adjustable

Cleveland Twist Drill Co., Cleveland, Ohio.

Riveters, Multiple Spindle

Grant Mfg. & Mch. Co., Bridgeport, Conn.

Riveters, Pneumatic

Grant Mfg. & Mch. Co., Bridgeport, Conn.

Riveting Machines

Grant Mfg. & Mch. Co., Bridgeport, Conn.

Red Cutters

Armstrong-Blum Mfg. Co., 341 N. Francisco Ave., Chicago
Lewthwaite Mch. Co., T. H., 311 E. 47th., N. Y.

Scraping Machines

Anderson Bros. Mfg. Co., Rockford, Ill.

Screw Driving Machines, Automatic

Reynolds Machine Co., Massillon, Ohio

Screw Machines, Automatic

Automatic Machine and Engineering Co., Inc., Detroit, Mich.

Screws, Cap, Drive, Lag, Mch. & Wood

Elico Tool & Screw Corp., Rockford, Ill.

Shafte, Flexible

Strand Co., N. A., 6001 N. Lincoln St., Chgo.

Shaping Machines

Osborne & Sexton Machy. Co., Columbus, O.

Shears, Hand

Armstrong-Blum Mfg. Co., 341 N. Francisco Ave., Chicago
Lewthwaite Machine Co., T. H., 311 E. 47th St., New York
Whitney Metal Tool Co., Rockford, Ill.

Special Tools and Machinery

American Tool Works, Inc., Hartford, Conn.

Speed Reducers, Worm, Spur and Herringbone

Boston Gear Works, Inc., North Quincy, Mass.

Speed Reducers

Cullman Wheel Co., 1359 Altgeld St., Chgo.

Spot Welding Machines, Speed.

Elster Electric Corporation, Newark, N. J.

Sprockets

Cullman Wheel Co., 1359 Altgeld St., Chgo.

Stamps, Steel and Rubber

Schwerdtle Stamp Co., Bridgeport, Conn.

Stencils, Brass and Oil Board

Schwerdtle Stamp Co., Bridgeport, Conn.

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Straightening Machines

Whitney Metal Tool Co., Rockford, Ill.

Stud Setters

Procurier Safety Chuck Co., 14 S. Clinton St., Chicago

Tap Extractors

Walton Co., Hartford, Conn.

Tap Holders

Procurier Safety Chuck Co., 14 S. Clinton St., Chicago

Tapping Attachments

Procurier Safety Chuck Co., 14 S. Clinton St., Chicago, Ill.

Tapping Machines and Attachments

Burke Machine Tool Co., Conneaut, Ohio
Procurier Safety Chuck Co., 14 So. Clinton St., Chicago, Ill.
Whitney Metal Tool Co., Rockford, Ill.

Thermometers, Resistance Type

Illinois Testing Laboratories, Inc., 150 West Austin Ave., Chicago, Ill.

Threading Machines, Automatic, Stud

Grant Mfg. & Mch. Co., Bridgeport, Conn.

Threading Tools

Armstrong Bros. Tool Co., 808 N. Francisco Av., Chicago

Tool Holders

Armstrong Bros. Tool Co., 808 N. Francisco Av., Chicago
Western Tool & Mfg. Co., Springfield, O.

Tools, Boring

Armstrong Bros. Tool Co., 808 N. Francisco Av., Chicago

Tools, Lathes and Planer

Armstrong Bros. Tool Co., 808 N. Francisco Av., Chicago

Tools, Machinists'

Armstrong Bros. Tool Co., 808 N. Francisco Av., Chicago

Tube Flanging Machines

Grant Mfg. & Mch. Co., Bridgeport, Conn.

Universal Joints

American Tool Works, Inc., Hartford, Conn.
Boston Gear Works Inc., Norfolk Downs, Mass.

Used and Rebuilt Machinery

Bennett Machinery Co., 90 Church St., New York, N. Y.
Bernstein, Geo. M., 221 N. Elizabeth St., Chicago, Ill.
Box Properties, Philadelphia, Pa.
Brown-Morris Co., Detroit, Mich.
Brown Machinery Co., St. Louis, Mo.
Brownell Machinery Co., Providence, R. I.
Cincinnati Mch. & Supply Co., Cincinnati, O.
Donahue Steel Products Co., 74th and Ashland Ave., Chicago
Eastern Machinery Co., Cincinnati, O.

Used and Rebuilt Machinery—Cont.

Elyria Belting & Mch. Co., Elyria, Ohio.
Easley Machinery Co., E. L., 825 Rees St., Chicago, Ill.
Gold Seal Mfg. Co., Providence, R. I.
Gouse, James, J., Boston, Mass.
Hill, Clark & Co., 845 W. Washington Blvd., Chicago, Ill.
Howarth Co., C. C., Detroit, Mich.
Hymen & Sons, Joseph, Philadelphia, Pa.
Indianapolis Machinery & Supply Co., Indianapolis, Ind.
Interstate Mch. Co., 130 S. Clinton, Chgo.
Iroquois Machinery Co., Buffalo, N. Y.
Johnson & Sons Machinery Co., Wm. C., St. Louis, Mo.
Jones Machine Tool Co., Cincinnati, Ohio
McDonald Machinery Co., St. Louis
Marr-Galbreath Mch. Co., Pittsburgh, Pa.
Midwest Equipment Co., 628 W. Lake St., Chicago, Ill.
Mid-West Machine Tool & Supply Company, Davenport, Iowa
Miles Machinery Co., Saginaw, W. S., Mich.
Norton-Broadway Mch. Co., Cincinnati, O.
O'Brien Machinery Co., Philadelphia
Oviatt & Co., D. C., Cleveland, Ohio
Osborne & Sexton Mch. Co., Columbus, O.
Reliance Machinery Sales Co., Pittsburgh, Pa.
Russell Machine Co., Pittsburgh, Pa.
Scott-Hansbach Mch. Co., 4607 W. 20th St., Chicago
Segal Machinery Co., 809 W. Lake St., Chicago, Ill.
Seyfert's Sons, Inc., L. F., Philadelphia, Pa.
Simmon-Machine Tool Corp., Albany, N. Y.
Steege Electric & Machinery Co., 26 South Clinton St., Chicago, Ill.
Strong, Carlisle & Hammond Co., Cleveland
Sun Machinery Co., 28 Van Ruren Street, Newark, N. J., Ohio
Temps Bros. Motor Co., Brooklyn, N. Y.
United Machinery & Supply Co., St. Louis, Mo.
Victor Machinery Co., 125 So. Clinton Street, Chicago, Ill.
Victor Machinery Exchange, 251 Center St., New York City
West Penn Machinery Co., Pittsburgh, Pa.
White Mch. Co., A. D., 108 N. Jefferson St., Chicago
Wigglesworth Mch. Co., Cambridge, Mass.
Winterer, Herman, L., Philadelphia, Pa.

Vises, Drilling Machine

Armstrong-Blum Mfg. Co., 841 N. Francisco Av., Chicago
Armstrong Bros. Tool Co., 808 N. Francisco Av., Chicago
Graham Manufacturing Co., Providence R. I.
Martin Tool & Die Works, J. E., Springfield, O.

Vises, Machinists'

Western Tool & Mfg. Co., Springfield, O.

Vises, Milling Machine

Graham Manufacturing Co., Providence, R. I.

Vises, Shaper

Graham Manufacturing Co., Providence, R. I.

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Eisler Electric Corporation, Newark, N. J.

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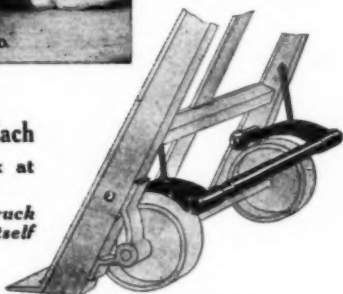
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1281 Caxton Bldg.,

Chicago, Ill.

Used and Rebuilt Machinery Section

Lists of Used and Rebuilt Machinery, either For Sale, Wanted, or For Exchange, set in uniform style, will be published in the Classified Section at the rate of 60 cents a line across the page, each issue, plus \$3.00 for name and address. Minimum charge, \$6.00. No display permitted.

Write directly to those offering the machines for sale, for prices and full descriptions. If what you seek is not advertised, use the blank enclosed to make known your wants in either new or used machinery and the publisher will pass them along to the advertisers.

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Grinder, sur. Dia. No. 3, 48"x12"x12".		Press, Lucas forcing, 30 ton.
Lathe, L. & S. sel. hd., 20"x20".		Press, No. 4 Z & H., inclinable.
Press, horn, Max-Am. No. 440 A grd.		Shaper, Steptoe 24", geared.
Drill, 4 spdl. L.-G., ind. m. d., 8" cap. p. f. & b. g., var. spd. 220-3-60, like new.		

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Herman L. Winterer	-	945 North Front Street, Philadelphia, Pa.
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Lathe, 36"x14" Johnson, q. c. g., d. b. g.		Miller, No. 3 Becker Univ., b. b.
taper attachment, c. s.		Press, No. 44 Adriance.
Lathe, 32"x12" Pittsburgh q. c., d. b. g.		Presses, Waterbury Farrell, geared pillar.
Lathe, 26"x11" Wickes semi, q. c., d. b.		

FOR SALE BY

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 Gas engines, (4) 2-cyl. 30 h. p.; 3-cyl. 50 h. p.; 3-cyl. 115 h. p.; 4-cyl. 150 h. p.;
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 meters complete. Good condition.
 Presses, Niagara No. 77-B; Consolidated No. 164-A, Consolidated No. 103,
 Rockford No. 8.

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199 Bent Street,	Cambridge, Mass.
Automatics, No. 00 B. & S., \$250.00	Miller, 6"x18" P. & W. thread.
Automatic, 9/16", 5 spdl. Nat. Acme.	Miller, No. 2 LeB. hvy. univ., m. d.
Boring mill, No. 0 G. & L.	Miller, 48"x24"x10" Ingersoll.
Grinder, No. 3 Bryant internal.	Planer, 30"x30"x8" Clev. openside.
Lathe, 18"-20"x20" L. & S.	Press, No. 3A Bliss.

FOR SALE BY

Gold Seal Manufacturing Co. Inc.	
1200 Eddy Street,	Providence, Rhode Island
Generator Set, motor G. E. 75 h. p. 3 phase, 60 cycle, 220 volt, direct con-	
nected to 45 k. w. Burke Generator 125 volt, 360 amperes. Price.....\$ 325.	
Generator Set, Crocker Wheeler motor 35 h. p., 3 phase, 60 cycle, 220	
volt, direct connected to Crocker Wheeler Generator, 19 k. w., 250	
volt, 100 amperes. Price..... 250.	
Both above equipped with starters and control panels.	

USED AND REBUILT MACHINERY

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Scott-Bansbach Machinery Co., 4607 West 20th St., Chicago, Ill.

Miller, Ingersoll slab, 42"x36"x9".....	\$ 409.
Planer, 24x24x5 Fitchburg, 1 head.....	100.
Planer, 36"x36"x12" Cincinnati with 2 heads.....	800.
Press, No. 30A Perkins o. b. i., 2" stroke, 1500 lbs.....	100.
Press, No. 3 American (R & K) o. b. i., 2 1/2" stroke 2000 lbs.....	125.
Press, No. 3 L. & J. o. b. i., 2 1/2" stroke, 2000 lbs.....	185.
Press, No. 4 Niagara o. b. i., 2" stroke, 1700 lbs.....	175.
Press, No. 5 Niagara o. b. i., 2 1/2" stroke, 2900 lbs.....	200.
Press, 47 ton o. b., 2 1/2" stroke, about 4900 lbs.....	150.
Saw, No. 5 Marvel high speed 6"x6".....	75.
Screw machine, No. 1 B. & O. plain head, 13/16" capacity.....	125.
Separator, Curtis oil, 1 bushel.....	200.
Separator, oil, American 1 1/2 bushel.....	200.
Shaper, 20" Cincinnati, crank, back geared, vise and c/s.....	350.
Turret lathe, 24x10" Milholland, for chuck and bar work.....	400.
Turret lathe, 34"x36" Acme with chucking equipment.....	300.
Turret lathe, 24" Steindle, 4" hole, side carriage.....	200.

FOR SALE BY

The Jones Machine Tool Co., Front & Pike Sts., Cincinnati, Ohio

Brake, (press) Ohl 10'.....	\$1000.	Press, No. 164 1/2 Toledo-toggle.....	\$ 400.
Boring mill, No. 21 Lucas.....	1000.	Press, No. 40B Robinson, d. c.....	575.
Boring mill, No. 32 G. & L.....	1750.	Press, No. 42 Robinson, d. c.....	1200.
Filing machine, Thiel.....	425.	Presses, horning 6, No. 21 Consolidated, each.....	125.
Gear cutter, No. 13 B. & S.....	375.	No. 14 Toledo adjustable table.....	425.
Gear hobber, No. 12 Barber-C.....	375.	No. 6 Toledo b. g. inclinable.....	575.
Grinder, No. 1 Diamond surf.....	475.	Pipe machine, 8" Saunders.....	275.
Grinder, 16x72 Landis for cr.....	575.	Radial, 4' Fosdick cone drive.....	175.
Lathe, 24x12 B. & E., quick c.....	575.	Radial, 5' American, g. h.....	1000.
Lathe, 32x12 B. & E., quick c.....	725.	Shaper, 16" American, b. g.....	175.
Lathe, 36x14 Bradford.....	325.	Shaper, 24" Queen City.....	475.
Miller, No. 2 Owen universal.....	200.	Square shear, 52" Bertsch 3. 6".....	475.
Miller, No. 2M Cin'ti, s. p.....	575.	Square shear, 10' pwr., 14 ga.....	450.
Millers, Nos. 2 & 3 Cin'ti, s. p.....	450.	Wheel lathe, 80", double head.....	325.
Press, No. 3 1/2 B. Bliss-toggle.....	450.		

We have a large stock of Lathes, Radials, Shapers, Square Shears, Presses, etc.,—all sizes. Let us have your inquiries. Send for new list.

FOR SALE BY

Wm. C. Johnson & Sons Machinery Co.,

1211-1223 Hadley Street,

St. Louis, Mo.

Bar shear, 5"x4".....		Miller, No. 1 U. S. hand.....	
Boring mill, 36" Gisholt.....		Miller, No. 5-B Brown & Sharpe.....	
Drill, 22" Barnes, back geared.....		Pipe machine, 8" Williams.....	
Drill, 24" Prentice, sliding head.....		Planer, 24"x24"x6" iron.....	
Drill, 25" Barnes back geared.....		Planer, 42"x42"x26" Wheeler, 2 hds.....	
Drill, 28" Barnes sliding head.....		Press, No. 57 Swaine straight back.....	
Drill, 1-spindle Avey.....		Press, No. 1 1/2 Bliss toggle.....	
Drill, 3-spindle Avey.....		Press, No. 37 Niagara str. back.....	
Grinder, Wells Bros. universal.....		Press, No. 34 Toledo cam drawing.....	
Grinder, 12"x60" Landis universal.....		Press, No. 723 Toledo cam drawing.....	
Hammer, 60 lb. Bradley helve.....		Punch, No. 14 W. W., 12" throat.....	
Hammer, 600 lb. steam.....		Punch, double end, two 20" throats, capacity 1" in 1".....	
Lathe, 16"x9" Lehman.....		Screw machine, No. 3A Warner & S.....	
Lathe, 24"x12" Lodge & Shipley.....		Shaper, 16" Ohio.....	
Lathe, 24"x12" Schumacher & Boye.....		Shaper, 24" American, b. g. crank.....	
Lathe, 30"x15" Lodge & S., q. c. g.....		Tapper, auto., Rickert & Schafer.....	
Lathe, 36"x15" American, q. c. g.....			

USED AND REBUILT MACHINERY

FOR SALE BY

West Penn Machinery Company

1208 House Building,

Pittsburgh, Pa.

Automatic, No. 0 Brown & S. b. d.
Air compressors, 30 to 2500 cu. ft.
Blower, Spencer turbine, 1800 c. f.
Bolt cutter, 1" Landis, 3 hds., m. d.
Bolt cutter, 2 1/2" Acme, sgl. hd. m. d.
Boring mill, 30" Bullard, turret hd.
Boring mill, 36" Bullard, rapid prod.
Boring mill, 72" Pond, 2 hds., b. d.
Boring mill, 10-16' Betts, 2 hds. m. d.
Boring mill, horiz. D. & H., 5-8" bar.
Brake, 5' press type, 10 gauge.
Brake, 8' D. & K. 10 ga. box & pan.
Brake, 10' Dreis & K. 8", m. d.
Bulldozers, Nos. 2, 4, 6, 28, 29 & 30.
Cranes, Electric Traveling.
Derrick, 10 ton, 60-ft. boom.
Die threader, Smalley General, dies.
Die sinker, No. E-3 Keller, m. d.
Drill, bench, 12" Buffalo, a. c., m. d.
Drill, mul. 4-sp., Moline Hole Hog.
Drill, radial, 2 1/2" Fossdick, t. a., b. d.
Drill, radial, 3 1/2" Cin. Bickford, s.p.d.
Drill, radial, 4' Prentice, t. a., b. d.
Drill, radial, 6' Dreses, s. p. d.
Flanger, McCabe, 4" capacity, dies.
Gear cutters, 11", 24" & 36" Gleason.
Gear cutter, spur, 36"x10" Newark.
Gear hobber, No. 4 Sch. & Sch. 116".
Grinder, centerless, No. 2 Cincinnati.
Grinder, centerless, No. 4-C Detroit.
Grinder, internal, No. 70 Heald.
Grinder, rad., 14" M. & D., m. d.
Grinder, surface, No. 16 Blanchard.
Grinder, surface, 14" Arter.
Grinder, surface, No. 2 Reid, b. d.
Grinder, tool & cut., No. 2 Walker.
Hammer, Blacker, power, 35-lbs.
Hammer, 80-lb. Bradley, cush. helve.
Hammer, 200-lb. Bradley, cush. helve.
Hammer, 200-lb. Bradley, compact.
Hammers, Nos. 2-B, 3-B, 4-B, Nazel.
Hammers, steam, 600 lb. to 6000 lbs.
Header, No. 2 Wat. Far., o.d., tr. st.
Jacks, 35-ton Barrett, ball bearing.
Keyseater, No. 0 & 3 Baker.
Lathe, 14"x6" Hendey, q. c. g., m. d.
Lathe, 16"x6" LeBlond, q. c. g., d.b.g.
Lathe, 24"x16" Bridgeford, g. hd. m. d.
Lathe, 26"x20" Bridgeford, g. h. m. d.
Lathe, 48"x26" Bridgeford, g. hd. m. d.
Lathe, turret, No. 6 Warner & S.
Lathe, turret, 18" Libby, m. d.
Lathe, turret, 24" Steidle, 6 1/2" hole.
Lathe, tur., 26" Gisholt, 9" hole, m. d.
Lysolm tables, 72"x30".
Miller, duplex, 24" Cincinnati, auto.
Miller, plain, No. 2-A Milwaukee.
Miller, universal, No. 3 LeBlond.
Nut tapper, 6-spindle Acme, 2".
Nut, tapper, 4" Acme, 4-spindle.
Motors, a. c. & d. c.
Pipe machine, 2" Landis.
Pipe mchs., 8" Oster, 8" Williams.

Planer, 30"x30"x10' Woodward & P.
Planer, 48"x48"x18' Cinti., belt drive.
Planer, o. s., 36"x36"x16' D. & H.
Planer, o.s., 48"x48"x16' D. & H. m. d.
Planer, rotary, 48" Niles, m. d.
Presses, arbor, No. 17 Greenerd.
Press, automatic, McDonald.
Press, o.b.i. Ferracute C1, 3" stroke.
Press, o.b.i., No. 5 Rockford, 8500 lb.
Press, hyd. tire, 300-ton W.-S.-M.
Press, hydraulic, 1,000 ton United.
Press, hyd., 400-ton Robertson, m. d.
Press, hyd. 100 ton Watson-Stilman.
Press, s. s., 13"x19 1/2", 2" stroke.
Press, No. 78 1/2 Bliss, t. r. 10" str.
Press, No. 92 B Toledo, d. c. 2 1/2" str.
Press, No. 96-A Toledo, d. c. 5" str.
Press, screw, No. 87 Niagara.
Press, wheel, 200-ton Lourie.
Punch, hand, Shatz, bar and angle.
Punch & sh. No. 6 L. & A. 1" thru 1 1/2".
Punch, No. 3-A Royersford, 20" thrt.
Punch, EF Cleveland, 36" thrt., 1"-1 1/2".
Punch, multiple, No. 5 H. & J. 10'.
Riveters, air, hammer, spinning.
Rolls, bending 7 x 3 1/2" Cleveland.
Rolls, bend, 8" x 3 1/2" Bertsch, d. e. b. d.
Rolls, bending, 12" x 1 1/2" H. & J. d. e.
Roller, thread, Nos. 30-40 & 60 W.-F.
Saw, band, metal No. 2 Klem, m. d.
Saw, band, No. 8 Marvel.
Saw, cold, 48" Newton, m. d.
Saw, friction, Nos. 2 & 3 Ryerson.
Saw, hack, No. 8 Marvel, 6" x 6".
Saw, hack, No. 4 Robertson, 8" x 8".
Screw mchs. Nos. 52, 53, 55 Nat. A.
Shapers, 16", 20", 24" & 36" G. & E.
Shaper, 48" Morton draw cut, m. d.
Shear, angle, 6" x 6" x 1" H. & J.
Shears, alligator, 1 1/2", 2", 3" & 4".
Shear, bevel, Lennox 4", b. d.
Shear, No. 1 Gray, 3/16", 34" gap.
Shear, splitter, gang 36", Yoder, m. d.
Shear, guil. No. 5 H. & J. 4" sq., m. d.
Shear, rotary, 4" Ryerson.
Shear, 36"x16 ga. Pexto, foot.
Shear, squ., 60"x3/16" McSherry b. d.
Shear, squaring 8"x14 ga. Oil.
Shear, sq., 16"x10 ga. Kutscheid, m. d.
Shear, squar. 12" Niagara, 10 ga., m. d.
Shear, 54" x 4" Garrison, 24" gap.
Shear, 12" x 1 1/2" Wheeling, 31" gap.
Slotter, 18" Dill, motor drive.
Straight'r., 48" United, 16 ga. 13 rolls.
Straightener, 1 1/2" round Abramson.
Straightener, 4" round Abramson.
Swaging mche., No. 5-A Standard.
Testing mche., Brinnell hardness.
Testing mches., 50,000 & 100,000-lb.
Tumbling barrel, 18"x36", b. d.
Upsetters, 1" to 6".
Welders, spot and butt.
Woodworking Machinery.

USED AND REBUILT MACHINERY

FOR SALE BY

Temps Bros. Motor Co., - - 802 Myrtle Ave., Brooklyn, N. Y.

ELECTRIC MOTORS.

Factory rebuilt, equal to new. One year guarantee. A. C. or D. C. Single phase, 2 or 3 phase. $\frac{1}{2}$ h. p. \$12.50; 1 h. p. \$16.00; 2 h. p. \$20.00; 3 h. p. \$27.50; 5 h. p. \$32.50. Others to 50 h. p. Also electric grinders. Special slow-speed or high-speed motors built to order. Generator sets. Your old motor re-wound to suit any special requirements. Tell us your motor problems.

FOR SALE BY

Brown-Morris Co., - 2950 E. Woodbridge St., Detroit, Mich.

2A Warner & Swasey Turret Lathes, latest type, (2).

2A Warner & Swasey Turret Lathes, factory rebuilt, (2).

These machines are equipped with chucks, guards, taper attachments, slide tools and flanged tool holders. They are in perfect condition and have had less than six months service since leaving the Warner & Swasey Factory.

No. 10 Brown & Sharpe External Grinders. A-1 condition, (2).

16" American Shaper.

These machines are all motor drive and include automatic starters, push button control and line switches. All motor equipment 220 volt, A. C., 60 cycle, 3 phase.

The above is surplus equipment offered for sale by the finest equipped Jig & Fixture Shop in the Middle West.

FOR SALE BY

McDonald Machinery Co.,

1535 N. Broadway, St. Louis, Mo.

Bolt mchs., Landis & Acme 14".

Boring mill, Lucas & Bul. hor. & vert.

Brake, D. & K. 6' 10 gauge, power

Drills, Cin-Bickford 3' & 3 1/2' radials.

Gear hobber, G. & E. 24" & 60".

Grinders, B. & S. No. 2 surf. & univ

Grinders, P. & W 14" vert. surf. b.b.

Keyseaters, M. & M. No. 2.

Lathes, Hendey 14"x6"; Hendey

20"x10" grd. hd.; 50 others in stock.

Milling machines, B. & S. No. 5, vert.

Milling machines, Van Norman

No. 2 duplex; B. & S. No. 1 1/2 Cinc.

No. 1 1/2, Hendey No. 1-B, Kemp.

No. 3; Ohio No. 29 B. & S. No. 2-A

single p. d., all universal; No. 3,

Kemp. No. 1, LeBlond No. 3-H;

B. & S. No. 3-B, s. p. d., all plain,

Cincinnati 18" automatic.

Pipe mchs., Curtis, B. & K. 12" m. d.

Punch presses, Bliss No. 20; Bliss

No. 21 1/2. Rob. No. 2 1/2 gld., o. b. i.

Screw machines, Foster No. 7.

Shapers, G. & E. S. & M. Cin., Ohio,

Steptoe, Queen City, 12", 16", 18".

20", 24" and 26".

Square shears, Niag. 62" 18 ga., pwr.

Turret lathes, W. & S. No. 2A univ.

FOR SALE BY

Midwest Equipment Co., - 628-30 W. Lake St., Chicago, Ill.

Air Compressors, 8x8 and 6x6 Ingersoll Rand, complete.

Arc welder, General Electric, 200 amp. cap., m. d., complete.....\$ 275.

Diac grinder, No. 2 Gardner 15", motor drive.....150.

Drill press, No. 2 Avey, 4 spindle, 15" overhang, 99 1/2 new.....400.

Gear hobber, No. 3 Barber Colman, with arbor and gears.....250.

Lathe, 16"x6" Lodge & Shipley, geared head, motor driven, complete.....250.

Lathe, 19"x8" Sidney, quick change, double back geared, complete.....335.

Milling machine, No. 2 Cin. Univ., div. head, tail stock, vise and arbors.....450.

Press, 30 ton Lucas straightening.....150.

Punch press, No. 4 Marshalltown, o. b. i., bolster plate, like new.....225.

Punch & shear, No. 53 Beloit, with angle cutting attachment.....145.

Radial drill, 30" Fostick, single pulley drive.....350.

Shaper, 7" Rhodes, complete with vise.....125.

Spot welder, 12 K. V. A. American Electric Fusion.....165.

Planers, Lathes, Screw Machines Air Compressors, Woodworking Machines,

USED AND REBUILT MACHINERY

FOR SALE BY

The O'Brien Machinery Co.,

113 N. Third St., Philadelphia, Pa.

Automatic, 14" Cone, practically new.
Bending rolls, 10" Bertsch, 4" cap.
Bending roll, 25" H & J, 4" cap.
Column facer, 14" Espen-Lucas.
Crane, electric travel, 15 ton a. c.
Drill, 4" Cincinnati-Bickford, radial.
Grinder, 30"x162" Landis, m. d.
Hammer, No. 6N Nazel, motor dr.

Hammer, 2000 lbs Chambersburg.
Lathe, 108"x18" Niles, motor drive.
Lathe, 23"x20" LeBlond, belt drive.
Lathe, 36"—60"x32" McCabe, belt.
Miller, No. 2 B. & S. pl., dbl. overarm
Pipe mchs. 2, 4, 6, 8 & 12" belt & m. dr.
Punch, "EF" Cleveland, 14"x1"
Shear, 84" Newbold, 4" cap., 27" gap.

FOR SALE BY

Marr-Galbreath Machinery Co.,

58 Water St., Pittsburgh, Pa.

Air compressor, 10x10" Chgo., n.s.b.
Air receivers, 4"x18", 150 lb., (14).
Angle roll, No. 3 Niagara, 14"x3/16".
Beading machine, No. 100 Niagara.
Bolt cutter, 4" Geometric, m. d.
Boring mill, 30" King; and Bullard.
Boring mill, horizontal 3" bar, b. m.
Brake, 8"x10 ga. Chicago, pan, m. d.
Brake, 52"x18 ga., P.S. & W., hand.
Brake 10" Keene toggle, 16 gauge.
Brakes, hd, 10", for 18 ga. Robinson.
Broaching mch. Nos. 1 & 3 LaPointe
Cold header, 7" W-F., solid die.
Crimping roll, 64" Robinson, 16 ga.
Drills, 20" b. g., p. f.
Drill, 24" Rockford, g. f. taper att.
Drill, 25" Snyder, s. h., b. g.
Drill, 26" Prentice, b. g., s. h., m. d.
Drill, radial, 5" Western, g. b., m. d.
Drill, radial, 3" Dreses.
Forging mchs., 14", 3" & 3 1/2" (steel).
Grinder, No. 14 Landis universal.
Grinder, universal t. & c. Nos. 2 & 3.
Grinder, 18-D. Rowbottom, o. h. b. b.
Hack saw, 8x8" Racine, belt.
Hack saw, 9x9" Peerless, m. d.
Hammer, 800 lb. Erie stm. forg., s. f.
Hammer, 1000 lb. Chbg., steam drop.
Hoists, chain, 1 to 8-ton capacity.
Jointer, (wood) 6" Wallace, motor.
Jointer, 8" F. & E., rd. hd.
Keyseater, No. 2 Mitts & Merrill.
Lathe, 12"x5" Hendey, q. c. g., m. d.
Lathes, 14"x6" Champion, q. c. g., tur.
Lathe, 14"x6" Hendey, m. d., t. a.
Lathe, 18"x8" L. & S. sel. hd. s. p. d. t. a.
Lathe, 19"x10" LeBlond, q. c. g., t. a.
Lathe, 20"x12" Monarch, q. c. g.; t. a.
Lathe, 22"x10" 10" Greaves-K., q. c. g.
Lathe, 22"x13" Lehman, g. h., q. c. g. ta.
Lathe, 24"x12" Pgh., q. c. g., chuck.
Lathe, 27"x16" Pgh., t. a., chuck.
Lathe, 30x15" Lehman, gd. hd.
Lathe, 32"x16" Pgh., q. c. g., chuck.
Lathe, 48"x26" geared head, m. d.
Milling machine, plain, No. 4 Burke.
Miller, No. 28 Ohio; No. 3 Cin'ti.
Miller, 2-GS. Hendey, g. b., s. p. d.
Millers, vert., Becker, 3, 4B, 5B.
Miller, No. 14 Garvin plain, (2).

Miller, No. 2-AU Garvin universal.
Miller, universal No. 4 B. & S.
Miller, auto: No. 2-M P. & J., s. p. d.
Motors, 1, 2 & 3 ph., also d. c.
Pipe machine, Williams, 3", s. p. d.
Planer, 30"x10" W. & P., 2-heads.
Press, 42-h. p. Toledo, horn, plain.
Press, No. 6 Toledo, o. b. i. pl. m. d.
Press, No. 14 Tol. horn, 3 1/2" & 4" st.
Presses, Nos. 3 & 4 Bliss, punch type.
Press, No. 19, Bliss o. b. i.
Presses, foot, No. 87 Bliss, pendulum.
Press, reducing, No. 61 Bliss, 4" str.
Punches, s. e. 36", 48", 60", 72" thts.
Punch, s. e., Badger, 7" thrt., 3"x8".
Punch, Rapid, 20" tht., 1"x14", m. d.
Punch & shear, d. e., 9-A., Beloit.
Punch & shear, d. e. 16" thts; 1 1/2"x1"
with angle & bar shear blades, m. d.
Punch & stake riveter, No. 123-C.
Toledo boiler makers.
Riveters, 2-A, 3-A, 5 1/2" B, high speed.
Roll, angle, No. 4 Buffalo.
Rolls, bend'g, 10"x5/16" Bertsch, d. e.
Rolls, bending, 8"x8" Bertsch, m. d.
Rolls, bend'g, 5"x5/16" Bertsch, d. e.
Screw machine, No. 8G B. & S.
Shaper, 15" Hendey, pillar, m. d.
Shaper, 16" Columbia g. b., s. p. d. 95g.
Shapers, G. & E., 16", 20", 24" & 32".
Shaper, 20" S. & M., g. b., s. p. d.
Shaper, 24" P. & J. down feed & m. d.
Shaper, 25" S. & M., b. g., crk., A-1.
Shear, 72"x3/16"x20" gap, Stoll.
Shears, 3" & 4" Lennox, throatless.
Shears, Alligator, 1", 1 1/2", 2", 3", 4".
Shear, throat, No. 18 Lennox, hand.
Shear, Unishear, 14 ga, 1/2" h. p. mtr.
Shear, rotary, 12" thrt., cap. 10 ga.
Shear, rotary, No. 208 Niagara,
circle attachment, No. 8 ga.
Shear, rotary, 16 ga., Yoder, 24" thr.
Shear, squaring, 8"x14 ga. power.
Shear, 10"x16 ga. Ohl power.
Slotter, die, Garvin, cone drive.
Turret lathe, 28" Gisholt, 9 1/2" h. s.
Turret lathe, 26"x7 1/2" h. s., Libby.
Wheel press, 60-ton W. S., 34"x8 1/2".
Send us your inquiries.

USED AND REBUILT MACHINERY

FOR SALE BY

Brownell Machinery Co.,

150 Pine St., Providence, R. I.

Auto. drop, 500 lbs. standard type.
Hammer, 125 lbs. Beaudry forging.
Lathe, 24"x28" New Haven, q. c. g.
Grinder, Diamond surface 24x12x12.
Planer, 17"x17"x4" Whitcomb.

Press, No. 440-A Max Ams horning.
Scales, Troemner analytical 200
grams.
Screw machine, No. 11-SP Garvin.
Saw table, No. 2 Crescent comb.

FOR SALE BY

Mid-West Machine Tool & Supply Co.,

Davenport, Iowa

Automatics, Nos. 0 & 00 B. & S.
Drill, Allen 6 spindle, h. s.
Grinder, 10"x36" Norton.
Grinder, No. 10 B. & S. ext.
Grinder, No. 22 Heald rotary surf.

Hobbers, Nos. 3, 12-B & C.
Lathe, No. 9 LeBlond multi-cut.
Millers, Nos. 1 & 2 Brown & Sharpe.
Radials, 3' Cincinnati Bickford.
Turret lathe, No. 6 Warner & S.

Partial list; send us your inquiries.

FOR SALE BY

Geo. M. Bernstein & Co.,

225 No. Elizabeth St., Chicago, Ill.

Bolt cutter, 18" Reliance.....\$ 95.
Bolt cutter, 24" Nat. 37 sts. ds. 245.
Drill, No. 2 Colburn Mfg. h. d. 175.
Drill, No. 4 Colburn Mfg. h. d. 250.
Drill press, 20" Superior..... 27.
Gear hobber, No. 3 B-C..... 250.
Lathe, 16"x8" South Bend gap... 165.
Miller, No. 1 Kemp. univ., v h. 375.
New 4 Jaw Independent Lathe Chucks, 3" \$3.50, 4" \$4.50, 5" \$6.50, 6" \$8.00

Miller, No. 3 Kemp. plain.....\$285.
Pipe machine, 4" Stoeber..... 90.
Planer, 30"x24"x6" Rockford... 145.
Saw, No. 1 Marvel hack..... 17.
Screw mch., No. 2G-B & S. auto. 375.
Screw press, 20 ton Stecher..... 115.
Shaper, 12" Smith & Mills..... 95.
Tapper, No. 2X Garvin..... 80.

FOR SALE BY

Brown Machinery Co.,

2333 N. 9th St., St. Louis, Mo.

Drills: 24", 26" and 32" Barnes and
Rockford; 4-spindle Moline.
Grinders: No. 6 Besly dbl. spindle;
No. 220 Badger auto. disc; 12x30"
Modern, plain, s. c. c. s.; No. 12
Brown & Sharpe, universal tool.
Hammer, 40 lb. Bradley, halve.
Lathes, 30" Blaisdell; 28-40" Lodge
& Shipley; 26" Putnam, t. a.; 20"
American, t. a.; 16" L. & S.; 16"
Monarch; 12" & 14" Sen. Falls, q. c. g.

Millers: No. 2 Hendey-Norton, univ.;
No. 3 Fox; No. 4 Hendey Lincoln;
No. 3 Kemsmith, universal.
Press, No. 7 Zeh & Hahneman,
Nos. 1, 3, 4 Lashbough Jordan.
Punch, Cleveland C 1/2 in 1/2"; Rock
River Style L 1/2 in 1/2".
Shaper, 24" Ohio.
Shear, 50" 10 ga Excelsior gap.
Threaders: 1/2" Geometric; National
1 1/2" double head.

FOR SALE BY

Reliance Machinery Sales Company

1405 Brighton Road, N. S.

Pittsburgh, Pa.

Car wheel borer, 42", (cheap).
Hammer, 100 lb. Beaudry upright.
Hammer, 10,000 lb. Chamb. st. drop.
Elect. crane, 10 t. P. & H. 56' sp. 220 v.
Press, No. 39 Bliss horn. sw. table.
Planer, rotary, 50", on turntable, m. d.
Punch, 12" Bertsch, 1/2"x1/2", m. d.
Punch, 45" Beatty, 1" thru 1", m. d.
Punch, Whittemore comb. 1/2" thru 1/2"
Punch, coping, No. 6 H. & J., 32"
throat, motor drive.

Punch, horizontal No. 2 H. & J., 1"
thru 1", motor drive.
Saw, metal band, 10"x10" Napier.
Shear, squaring, 48"x10 gauge.
Shear, squaring, 10"x12 gauge.
Shear, plate, 6"x1" H. & J. turntable.
Shear, 6"x8"x1 1/2" H. & J. dbl. angle.
Shear, 6"x6"x1" H. & J. dbl. angle.
Shear, 7"x7"x1" Pels double angle.
Shear, Wangler Rotary bevel, 1/2" cap.
Straightening & bending mch., hor.

USED AND REBUILT MACHINERY

FOR SALE BY

Bennett Machinery Co.

30 Church St., New York City

Grinder, No. 50 Heald, hydraulic fd.
Lathes, 27"x16' and 18"x8' Prentice.
Lathe, 14-16"x6' Lodge & S. cone.
Miller, No. 1 Hendey universal.
Miller, No. 3S Cincinnati univ.

Miller, No. 14B Spec. Milw. pl. m. d.
Punch and shear, No. 23 Pels.
Radial drill, 4' Cincinnati-Bickford.
Shaper, 14' G. & E., b. g., m. d.
Turret lathe, No. 4 W. & S. univ.

FOR SALE BY

Box Properties, Inc., - 951 North Front Street, Philadelphia, Pa.

Arbor press, No. 3 Greenard.
Boring mill, P. & H. 10', floor.
Boring mill, 42" Bullard.
Centering machine, 5" Whiton.
Drill, 30" tapping attachment.
Drill, 40" Universal, radial.

Drill, 4 spindle Allen. b. b.
Gear cutter, 36" Gould & Eberhardt.
Lathe, 42"x17' Bement.
Lathe, 19"-21"x8'6" Sidney, t. a.
Millers, No. 0 Rockford.
Tur. lathes, No. 2A W. & S.; 18" Libby

FOR SALE BY

Miles Machinery Co.,

Saginaw, W. S., Mich.

Brake, 6"x3/16" Chicago.
Compressor, 44"x44" Gardner.
Drill, 26" Rockford.
Drill, radial, 3' Morris.
Gear shaper, No. 6 Fellows.
Grinder, surface, No. 2 B. & S.
Grinder, 12"x36" Cincinnati.
Hammer, air, No. 3B Nazel.

Lathe, 18"x8' Lodge & Shipley.
Lathe, tur., Nos. 24 & 3A W. & S.
Mill, horizontal, 24" bar, Cleveland.
Mill, boring, 60" Colburn.
Miller, Nos. 14, 2 & 24 Rockford.
Planer, 36"x36"x8' Gray.
Press, Nos. 3 & 5 Toledo, o. b. i.
Shaper, 16" & 20" Ohio.

FOR SALE BY

Joseph Hyman & Sons, - 2600 E. Tioga St., Philadelphia, Pa.

Stamping Press Specialists. 1200 Presses In Stock.

GAP FRAME DOUBLE CRANK PRESSES

No. 21 Bliss, flywheel, bed 34"x9", opening in back 25", wgt. 4100 lbs.
No. 23-D Bliss, flywheel, bed 72"x21", opening in back 60", wgt. 13,000 lbs.
No. 24-B Bliss, grd., tie rod, bed 55"x14", opening in back 42", wgt. 16,000 lbs.
No. 203-D Toledo, grd., bed 52"x13", opening in back 43", wgt. 10,600 lbs.

KNUCKLE JOINT EMBOSsing PRESS.

No. E-52 Ferracute, 150 tons pressure, width bet. uprights 13", wgt. 7000 lbs.

AUTOMATIC DROP PRESS.

No. 2 Standard, 200 lb. belt lift, gap frame, 4 poppets, wgt. 4300 lbs.

FOR SALE BY

Interstate Machinery Co., - 130-2 So. Clinton St., Chicago, Ill

Beader, Voder 20" thr., 14 ga. cap.
Bending rolls, 8' Kling Pyramid 4"
cap., m. d. 8' 10'; 3' 14 drop e.
Brake press, 10' 10 ga. Ohl m. d.
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11/64	.40	1.26
3/16	.57	1.45
13/64	.50	1.45
7/32	.69	1.62
15/64	.60	2.55
1/4	.82	2.55
17/64	.88	3.19
9/32	.95	3.19
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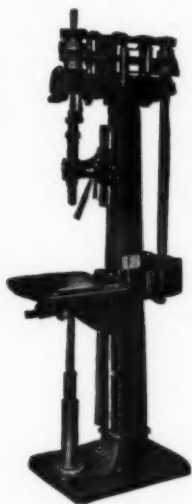
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